

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-006466**Date Inspected:** 21-Apr-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1845**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 645**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** TOBG and Tower Fabrication**Summary of Items Observed:**

CWI Inspector: Mr. Peng Guo, Mr. Shi Lin

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. The QA Inspector observed the following:

Prior to Caltrans QA Inspectors' concurring with issuance of OBG deck plate closed rib green tag releases a review of the ultrasonic inspection database is performed to verify all closed rib tack weld repair locations have been ultrasonically accepted. Today this QA Inspector, Mr. Paul Dawson, performed data entry of ultrasonic inspection information from the field generated Ultrasonic inspection data sheets onto the common drive computer database for the following OBG deck panels: DP536-001, DP177-001, DP335-001, DP470-001, DP479-001, DP121-002, DP337-001, DP228-001, DP416-001, DP418-001, DP474-001, DP286-001 and DP443-001.

Tower Bay 10

On April 19, 2009 this QA Inspector performed visual inspections of Tower East Shaft diaphragm plate to skin E welds as requested by "Inspection Notification Document" #02711 and at that time ABF had not completed the weld signoff sheets for these welds. Today ABF representative Mr. Chen Wei Long presented the QA Inspector with a signoff sheet for these Tower East Shaft diaphragm plate to skin E welds. The QA Inspector observed that several of the welds that were listed on this sheet had not been presented to the QA Inspector for visual inspections

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

on April 19. Today this QA Inspector performed final random visual inspection of the lower Double Diaphragm web to skin "E" welds at elevation 18m, weld ESD1-A167G/H-125; 23m, weld ESD1-A167G/H-42; 28m, weld ESD1-A167G/H-114; 33m, weld ESD1-A167G/H-113; 38m, weld ESD1-A167G/H-111; 43m, weld ESD1-A167G/H-110 and 47.6m, weld ESD1-A167G/H-125. The QA Inspector observed welds at elevation 18m, 23m, 28m and 43m are visually rejected due to base material gouging and ZPMC QC representative Mr. Ma Qian Li concurred that these welds require rework. The welds at elevations 38m and 47.6m appear to comply with project specifications.

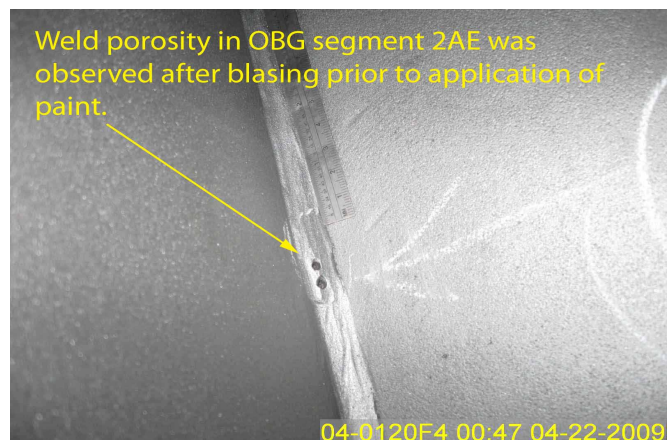
Blast Shop

This QA Inspector and Caltrans QA Inspector Mr. Utekar were informed that ZPMC has performed initial blasting of OBG segment 2AE and this segment is available for visual inspections of welds. Random visual inspections of part of OBG segment 2AE revealed approximately 5 welds with overlap, and several locations where welds have porosity that require grinding and welding. This inspection was limited due to ZPMC preparing to perform additional grit blasting of this OBG segment. See the photograph below for additional information. The results of these inspections were forwarded to other QA Inspectors who monitor this area during the dayshift.

OBG Bay 2

This QA Inspector observed ZPMC welder Mr. Chang Hai Xia, stencil 045209 is using flux cored welding procedure WPS B-T-2213-B-U3-F to make OBG Segment 2C weld 36. The QA Inspector observed a welding current of 240 amps and 34 volts. The welding procedure specification maximum voltage limit is 32 volts and this welding voltage is above the maximum limit. The QA Inspector showed QC Inspector Mr. Pan Wen long this welding voltage and Mr. Pan Wen long adjusted the welding voltage to approximately 31 volts prior to additional welding. The QA Inspector also informed CWI Mr. Shi Lin that the QA Inspector had observed a high voltage. Items observed by this QA Inspector do not appear to be fully progressing in compliance with project specifications. See the photograph below showing Mr. Pan Wen long adjusted the welding voltage.

This QA Inspector observed ZPMC welder Mr. Ji Hong Wei, stencil 058245 is using flux cored welding procedure WPS B-T-2213-B-U3-F to make OBG Segment 2C weld 34. The QA Inspector observed a welding current of 245 amps and 27 volts. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.



WELDING INSPECTION REPORT

(Continued Page 3 of 3)

Summary of Conversations:

See above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
----------------------	-------------	-----------------------------

Reviewed By:	Clifford,William	QA Reviewer
---------------------	------------------	-------------